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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,833	01/09/2006	Miyoshi Watanabe	07241.0043	3458

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EXAMINER
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ROBINSON, CHANCEITY N

ART UNIT	PAPER NUMBER
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4191

MAIL DATE	DELIVERY MODE
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02/12/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/563,833	<b>Applicant(s)</b> WATANABE ET AL.	
	<b>Examiner</b> CHANCEITY N. ROBINSON	<b>Art Unit</b> 4191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 16-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 6-15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>See Continuation Sheet</u> .                                  | 6) <input type="checkbox"/> Other: _____                          |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :01/09/2006,06/07/2006 &10/04/2007.

**Method and Apparatus for Manufacturing Relief Material for Seamless Printing**

Examiner: Chanceity Robinson S.N. 10/563,833 Art Unit: 4191 Date: January 22, 2008

***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

***Election/Restrictions***

2. Applicant's election without traverse of Group I claims 1-15, in the reply filed on January 17, 2008 is acknowledged. Claims 16-26 are withdrawn from further consideration.

***Claim Objections***

3. Claims 6-15 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention. The scope of "capable of", "predetermined", and "desired" recited in the independent claim 1 is unclear as well as "desired" recited in the dependent claim 5. The definition and determination of "capable of", "predetermined", and "desired" is not clearly defined by the claims; the specification does not provide a standard for ascertaining the requisite element.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1,4-5 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Watanabe (JP 2002-079645) in view of Kozaki et al. (US 2002/0187429 A1).

Regarding claims 1 and 5, Watanabe disclose a spreading process which supplies photopolymer liquid to a cylinder peripheral face while rotating a cylinder (resin supplying means), by control based on the exposure stroke, and digital recording signal which an activity beam of light is irradiated and carry out photo-curing of the photopolymer to the applied photopolymer liquid concerned. See abstract and claim 1. The manufacture of the seamless cylinder printing is the ultraviolet rays which is the activity beam of light (ultraviolet rays), and is characterized by changing to sensible layer by which ablation is carried out to the infrared radiation of wavelengths regions after photopolymer liquid hardens by the exposure concerned in an exposure stroke. See paragraphs [0009-0015 & 0034] & claims 2-9. The photopolymer liquid is equipped

Art Unit: 4191

with a means to detect angle of rotation of a cylinder, a means to apply photopolymer liquid to a thickness. See claim 9. Furthermore, Watanabe disclose that the manufacturing installation of the seamless cylinder printing characterized by having the device which holds said laser sculpture head in fixed distance from a cylinder face and cylinder axis longitudinal direction is made to carry out linearity migration. The manufacturing installation and device is disclosed by Watanabe in figures 1-3, and the photopolymer liquid spreading device 110 arranged above the cylinder 100 holds the bucket 111 which holds the photopolymer liquid 10 straight-line processing the tip of the stationary plate 112 which constitutes the bucket 111 concerned is carried out with high precision as a doctor blade. See paragraphs [0024 - 0025] and figures 1-3. However, Watanabe does not disclose explicitly disclose using a doctor blade.

Kozaki et al. disclose a cover sheet on the surface is cut in the direction parallel to the sleeve circumference of the photosensitive resin sheet with a cutter knife. See paragraph 0067.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to include a knife (doctor blade) onto the relief material of Watanabe, because Kozaki reference teach the use of knife to formed a layer without any fault of pinholes and seamless flexographic printing plate. See examples 1-3.

Regarding claim 4, Watanabe disclose the seamless cylinder printing been manufacture with the ultraviolet rays whose activity beam of light is 200-400nm of wavelength. See claim 3 & paragraph [0027]. Watanabe fails to disclose the intensity of said ultraviolet rays. However, Kozaki et al. disclose where said whole surface of the

photosensitive resin sleeve was exposed in a light exposure using an ultraviolet fluorescent lamp of  $12\text{mW}/\text{cm}^2$ . See example 1 & paragraph [0074].

Furthermore, Kozaki et al. do not explicitly disclose the viscosity of the liquid photosensitive resins. Nevertheless, it is well known in the art that the viscosity of the liquid photosensitive resin is in a range of 10kPa at 20°C as evidenced by Yamada et al. (US 2007/0160928 A1). See paragraph [0061].

6. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe (JP 2002/079645) in view of Kozaki et al. as applied to claim 1, 4, 5 above, and further in view of Bode et al. (EP 1,158,365 A1).

Regarding claim 2, Watanabe and Kozaki et al. teach a method for producing relief material for seamless flexographic printing using a liquid photosensitive resin comprising of a setting step, supplying step, molding step, and exposing step. However, Watanabe and Kozaki et al. do not explicitly disclose having a least one end of the resin receiving plate having a resin flow preventive movable dam.

Bode et al. disclose a coating roll and a container for the coating liquid, both mounted on a coating table (preventive moveable dam). The coating table can be moved by controller driven motors in a lateral direction, left and right, parallel to the horizontal axis of the printing cylinder. Furthermore, Bode teaches the coating table can be moved by motors up and down, so that coating roll can be moved upwards and downward relative to printing surface. See paragraphs [0016-0018, 0020-0037].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include a coating table (preventive moveable dam) onto the relief material of Watanabe and Kozaki, because Bode et al. teach the use of the table to provide uniformity, apply optional width and high coating accuracy. See paragraphs [0036-0037].

Regarding claim 3, Bode et al. disclose a shaping step by simultaneous rotating of printing cylinder and rotating and moving of the coating roll coats a thin layer of the coating liquid onto the surface of printing cylinder. Furthermore, Bode et al. disclose a gap of the thickness of the fluid film is adjusted between the surface of the printing cylinder and the outer surface of the coating roll. the uniformity and thickness of the coating can be controlled by rotation of the printing cylinder, rotation of the coating roll and linear speed of a coating table, which the method coats very clean having high-quality flexographic printing forms. See paragraphs [0017-0018, 0020 & 0035-0037].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include a shaping step into the method of manufacturing seamless printing plate of Watanabe and Kozaki, because Bode et al. teach the use of a shaping step to have uniform, high coating accuracy, high sleeve-to-sleeve reproducibility and thickness. See paragraphs [00018 & 0035-0037].

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHANCEITY N. ROBINSON whose telephone number is (571)270-3786. The examiner can normally be reached on Monday to Thursday:



Art Unit: 4191

7:30 am-5:30 pm eastern time. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dah-Wei Yuan can be reached on (571)272-1295. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Chanceity N Robinson/  
Examiner, Art Unit 4191

/Dah-Wei D. Yuan/  
Supervisory Patent Examiner, Art Unit 4191